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| Your case No. |             |
| Our case No.  | FUP-1118-US |

| Inventor, Patent Number,<br>Country, Author, Title, Name<br>of Document | Publication<br>Date<br>(day/month/year) | Concise Explanation of the<br>Relevance<br>(indication of page, column,<br>line figure of the relevant<br>portion) |
|---|---|--|
| 1. Japanese patent application<br>No. 2001007768                        | Application date<br>(12/1/01)           | Abstract is enclosed.  |



## PATENT ABSTRACTS OF JAPAN

(11) Publication number: **2001007768 A**(43) Date of publication of application: **12.01.01**

**(54) WAVELENGTH CHARACTERISTIC CONTROL  
METHOD OF OPTICAL TRANSMISSION POWER  
BY RAMAN AMPLIFICATION, WAVELENGTH  
MULTIPLEX OPTICAL COMMUNICATION  
SYSTEM USING THE SAME, AND LIGHT  
AMPLIFIER**

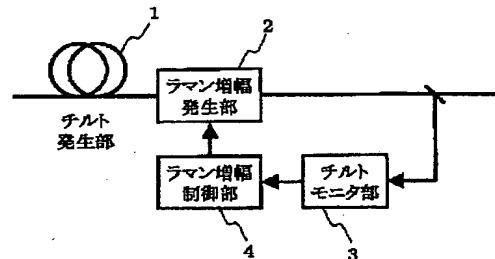
part 2 according with the monitor result of the tilt monitor part 3. Thus, the gain wavelength characteristic of Raman amplification is controlled, so that the wavelength characteristic of optical transmission power is flattened.

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## (57) Abstract:

**PROBLEM TO BE SOLVED:** To automatically compensate the wavelength characteristic of optical transmission power and to improve transmission characteristic, without damaging respective channel light beams by compensating the wavelength characteristic for a WDM(wavelength multiplex) signal light where the wavelength characteristic is generated in optical transmission power thorough the use of the gain wavelength characteristic of Raman amplification.

**SOLUTION:** A Raman amplification generation part 2 Raman-amplifies WDM signal light from a tilt generation part 1. Thus, a wavelength characteristic (tilt), generated in optical transmission power between channels, is compensated and optical transmission power between the channels is made uniform in the tilt generation part 1. A tilt monitor part 3 monitors the wavelength characteristic of optical transmission power, by using a part of WDM signal light outputted from the Raman amplification generation part 2. A Raman amplification control part 4 adjusts the power of Raman excitation light in the Raman amplification generation



(51) Int. Cl

**H04B 10/17****H04B 10/16****G02F 1/35****H01S 3/06****H01S 3/30****H04J 14/00****H04J 14/02**(21) Application number: **11375092**(22) Date of filing: **28.12.99**(30) Priority: **23.04.99 JP 11115971**(71) Applicant: **FUJITSU LTD**(72) Inventor: **ONAKA YOSHINORI  
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